ORDER NO. HAD8604473C8

Service Manual

Cassette Deck

RS-B106

RS-B106

Dolby NR-Equipped
Stereo Cassette Deck

DOLBY SYSTEM *

Color

(K)...Black Type
(S)...Silver Type

Color	Areas
(K) (S)	[E].....All European areas except United Kingdom.
(K) (S)	[EK].....United Kingdom.
(K) (S)	[EH].....Holland.
(K) (S)	[EG].....F.R. Germany.
(K) (S)	[XA].....Asia, Latin America, Middle East and Africa.
(K) (S)	[XL].....Australia.

RS-D550W MECHANISM SERIES

SPECIFICATIONS

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Heads	
REC/PLAY	Solid Permaloy head
Erasing	Double-gap ferrite head
Motors	Electronically controlled DC motor
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Tape speed	4.8 cm/sec.
Frequency response (w/o Dolby N.R.)	
METAL	20 Hz~16 kHz 30 Hz~15 kHz (DIN)
CrO_2	20 Hz~15 kHz 30 Hz~15 kHz (DIN)
NORMAL	20 Hz~15 kHz 30 Hz~15 kHz (DIN)
Wow and flutter	0.08% (WRMS) ±0.2% (DIN)
Fast Forward and Rewind Time	Approx. 95 seconds with C-60 cassette tape

S/N	(signal level = max recording level, CrO_2 type tape)
DOLBY NR in	66 dB
DOLBY NR out	57 dB
Input sensitivity and impedance	
MIC	0.25 mV/400 Ω~10 kΩ
LINE	60 mV/47 kΩ
Output voltage and impedance	
LINE	400 mV/1.5 kΩ
HEADPHONES	80 mV/8 Ω
Power consumption	15W
Power supply	
For Australia	AC 50 Hz/60 Hz, 240V
For continental Europe	AC 50 Hz/60 Hz, 220V
For others	AC 50 Hz/60 Hz, 110V/127V/220V/240V
Dimensions (W×H×D)	430 × 115 × 221.5 mm
Weight	3.4 kg

Note:
Specifications are subject to change without notice.
Weight and dimensions are approximate.

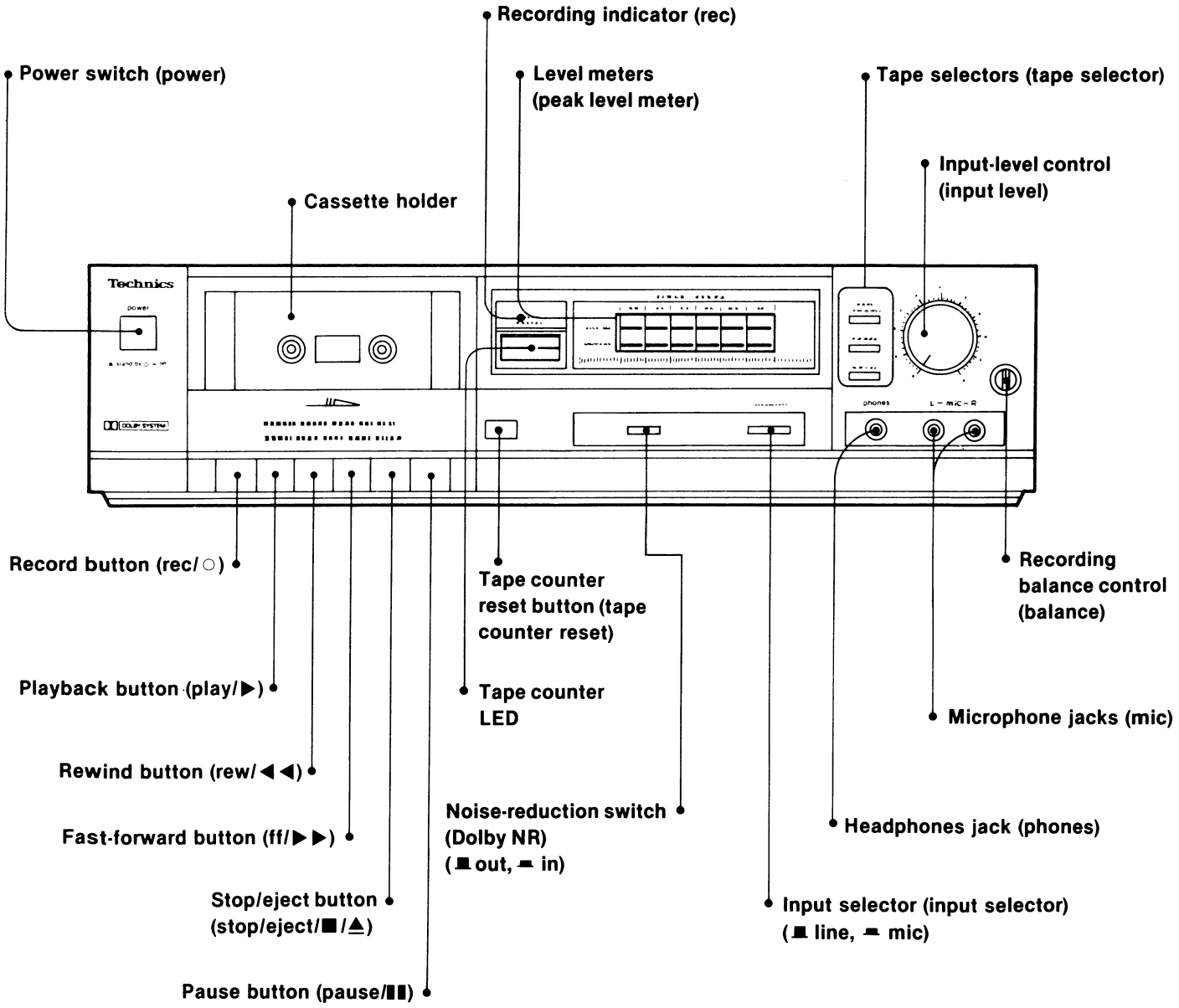
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

■ CONTENTS

■ LOCATION OF CONTROL



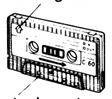
■ OPERATION

Recording

1 Power: "on" (▟ → ▬)

2 Press and insert the tape cassette.

The side to be recorded facing outward.



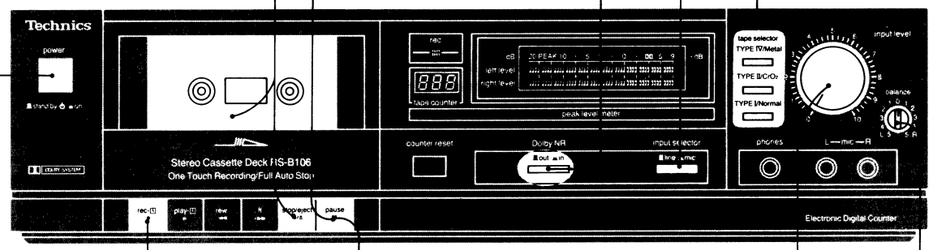
Part where tape is exposed facing downward.

3 Press.

4 "out" or "in".

5 Select the sound source.

6 Set to position corresponding to type of tape to be used.



7 Press.
(Recording stand-by mode)

8 Begin the program source to be recorded.

9 Adjust the recording level.
(Refer to below.)

10 Adjust left/right volume balance.

11 Press.
(Recording will begin.)

To erase recorded sounds

1. **Set the Dolby noise-reduction switch to the "out" position.**
2. **Set the input level control to the minimum (0) position.**
3. **Prepare in the same way as for recording, and then let the tape run.**

Note that any sounds on the tape will be automatically erased if a new recording is made on that part of the tape.

Adjustment of the recording level

The numbers which you should use as a guide for the adjustment of the tape level will differ depending upon the type of tape.

Normal tape CrO_2 tape	Metal tape
DD (+3 dB)	+5 dB

Timer Recording/Playback

If an audio timer (option) is connected to this unit, recording of a radio broadcast, or tape playback, will automatically begin at the preset time.
Connect the AC power cord of this unit to the power source outlet of the timer.
(See the operating instructions of the timer for detailed information.)

Timer recording

1. **Prepare for recording.**
   (Follow steps 1 through 10 of "Recording". After adjusting the recording level, press the stop button and the pause button.)
2. **Set the timer to the desired recording-start time.**
3. **Press the record button.**
   (At the set time, the power will switch ON and the broadcast will be recorded.)

After setting the timer

Make sure that the power switch is set to the "on" position.

Timer playback

1. **Rewind the tape to the position from which you want playback to begin.**
2. **Set the timer to the desired playback-start time.**
3. **Press the playback button.**
   (At the set time, the power will be switched ON and the playback will begin.)

After setting the timer

Make sure that the power switch is set to the "on" position.

■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1 — How to remove the case cover

Procedure 1

• Remove the 4 screws (❶~❹).

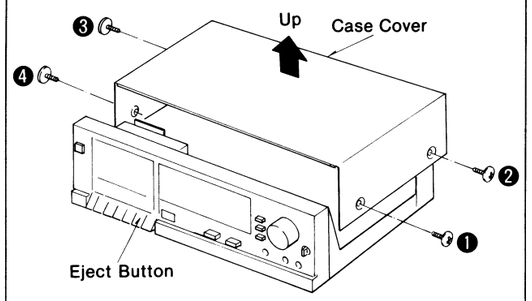


Fig. 1

Ref. No. 2 — How to remove the mechanism unit

Procedure 1 → 2

1. Push the eject button (see fig. 1).
2. Remove the 6 screws (❶~❻).
3. Remove the counter belt (for mechanism).

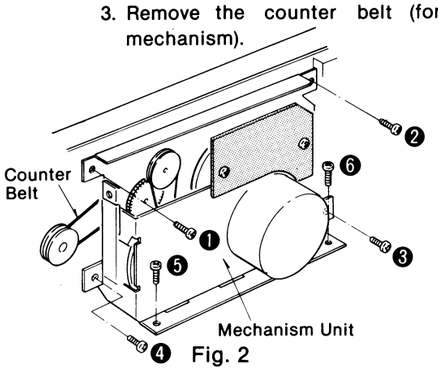


Fig. 2

Ref. No. 3 — How to remove the LED meter P.C.B.

Procedure 1 → 3

• Remove the 2 screws (❶, ❷).
• Receive the 2 tabs aside.

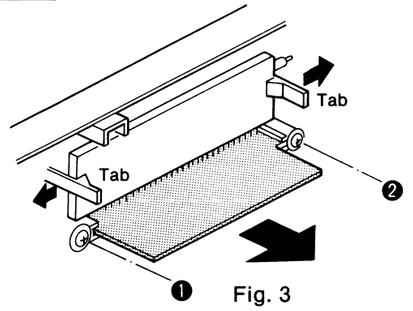


Fig. 3

Ref. No. 4 — How to remove the tape selector P.C.B.

Procedure 1 → 4

1. Remove the 2 screws (❶, ❷).
2. Pull out the volume knob.

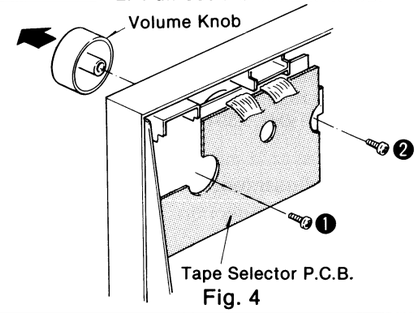


Fig. 4

Ref. No. 5 — How to remove the front panel

Procedure 1 → 2 → 3 → 4 → 5

• Remove the 4 screws (❶~❹).

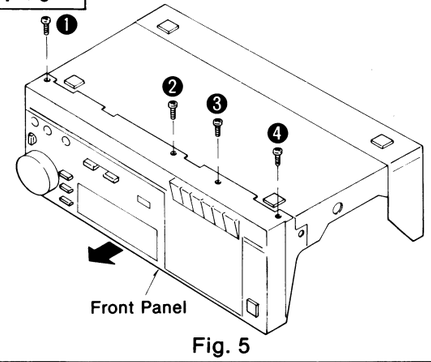


Fig. 5

Ref. No. 6 — How to remove the main P.C.B.

Procedure 1 → 6

1. Remove the 2 screws (❶, ❷).
2. Open the 2 tabs aside, and then pull down the back chassis.

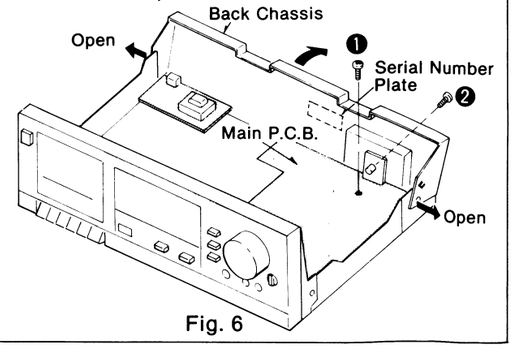
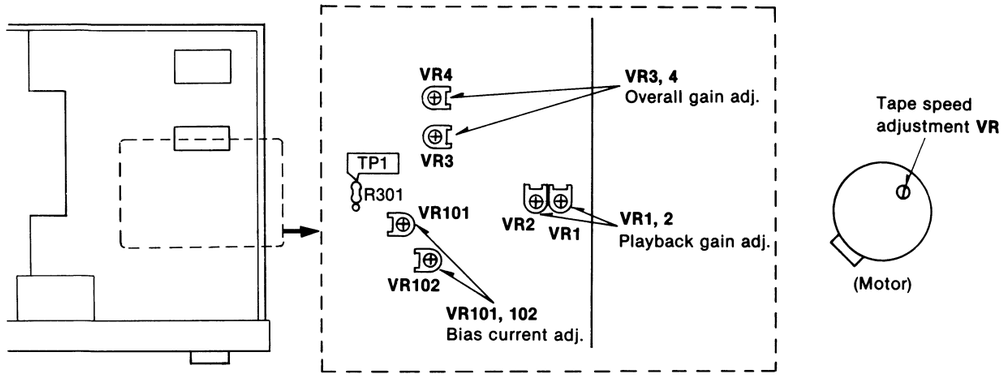


Fig. 6

*** Serial No. Indication**

• The serial number plate of the product is attached to the back chassis (shown in fig. 6).

■ MEASUREMENT AND ADJUSTMENT METHODES



Measurement Condition

- Input level controls; Maximum
- Balance controls; Center
- Tape select switch; Normal
- Dolby NR switch; Out
- Make sure heads are clean
- Make sure capstan and pressure roller are clean.
- Judgeable room temperature 20±5°C (68±9°F)

Measuring instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator
- ATT (Attenuator)
- DC voltmeter
- Resistor (600Ω)

Test tape

- Head azimuth adjustment (8kHz, −20dB); QZZCFM
- Tape speed adjustment (3kHz, −10dB); QZZCWAT
- Playback frequency responce (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, −20dB); QZZCFM
- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
  - Normal reference blank tape; QZZCRA
  - CrO_2 reference blank tape; QZZCRX
  - Metal reference blank tape; QZZCRZ

Head azimuth adjustment

1. Test equipment connection is shown in Fig. 1.
2. Playback the azimuth adjusted part (8kHz, −20dB) of the test tape (QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximized. (When the adjusting positions are different with L-CH and R-CH, find a position where the outputs of L-CH and R-CH are balanced, and then make the adjustment.)
3. At the same time, draw a lissajous waveform and eliminate phase deflection.

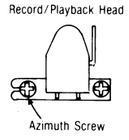


Fig. 2

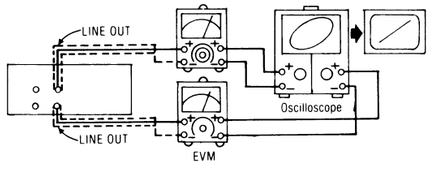


Fig. 1

Tape speed adjustment

1. Test equipment connection is shown in Fig. 3.
2. Playback the middle part of the test tape (QZZCWAT).
3. Adjust the VR in the motor so that the output is within the standard.

Standard value: 3000±10Hz

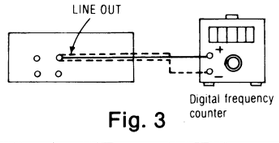


Fig. 3

Playback frequency response

1. Test equipment connection is shown in Fig. 4.
2. Playback the playback frequency response part (315Hz, 12.5kHz~63Hz, −20dB) of the test tape (QZZCFM).
3. Check that the frequency is within the range shown in Fig. 5 for both L-CH and R-CH.

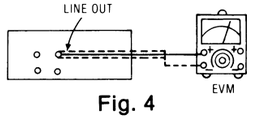


Fig. 4

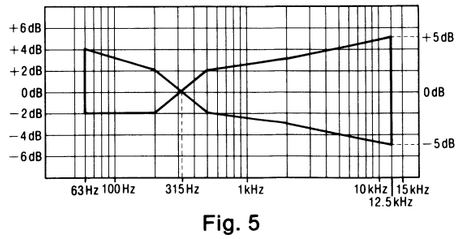


Fig. 5

Playback gain adjustment

1. Test equipment connection is shown in Fig. 4.
2. Playback the playback gain adjusted part (315Hz, 0dB) of the test tape (QZZCFM).
3. Adjust VR1, (L-CH) {VR2 (R-CH)} so that the output is within the standard.

Standard value: 0.4±0.5dB (0.02V)

Overall frequency response

1. Test equipment connection is shown in Fig. 6.
2. Set the tape selector switch to the normal position.
3. Set a normal blank tape (QZZCRA) and record by applying signal (50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz and 10kHz), 20dB attenuated from the reference input level signal (1kHz, −24dB).
4. Playback the signal recorded in step 3, and check that the level of each output frequency is within the range shown in Fig. 7 in comparison with the reference frequency (1kHz).
5. If it is not within the standard range, adjust the bias current by VR101 (L-CH) {VR102 (R-CH)} so that the frequency level is within the standard.
   - Level up in high frequency range.....Increase the bias current.
   - Level down in high frequency range.....Decrease the bias current.
6. After that increase the signal recorded on CrO_2 blank tape (QZZCRX) and metal blank tape (QZZCRZ) up to 12.5kHz and adjust in the same way as mentioned above and check that the frequency level is within the range shown in Fig. 8.

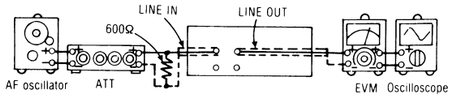


Fig. 6

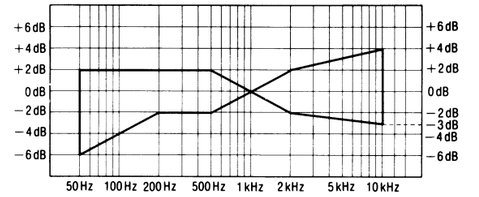


Fig. 7

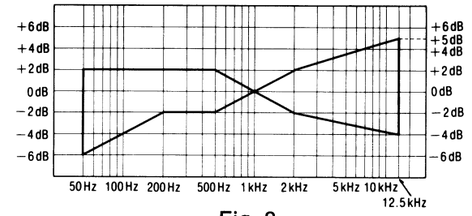


Fig. 8

Overall gain adjustment

1. Test equipment connection is shown in Fig. 6.
2. Set the tape selector switch to the normal position.
3. Set a normal blank tape (QZZCRA) and apply the reference input level signal (1kHz, −24dB) in record pause mode.
4. Adjust the output 0.42V by attenuator and then record.
5. Playback the signal recorded in step 3, and check that the output is within the standard.
6. If it is not within the standard, adjust VR3 (L-CH) {VR4 (R-CH)} and repeat the step (2), (3) and (4) until the output is within the standard.

Standard value: 0.4V±0.05V

Dolby NR circuit

1. Test equipment connection is shown in Fig. 9.
2. Set a normal tape and apply 5kHz signal in record pause mode.
3. Adjust by attenuator so that the output between terminal ⑥ (L-CH) {terminal ⑲ (R-CH)} of IC403 and ground is 12.3mV.
4. Turn NR switch ON, and check that the level changes as specified from the level in NR out mode.

Standard value: 8±1.5dB

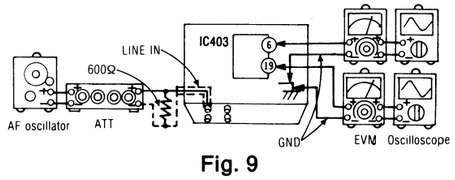
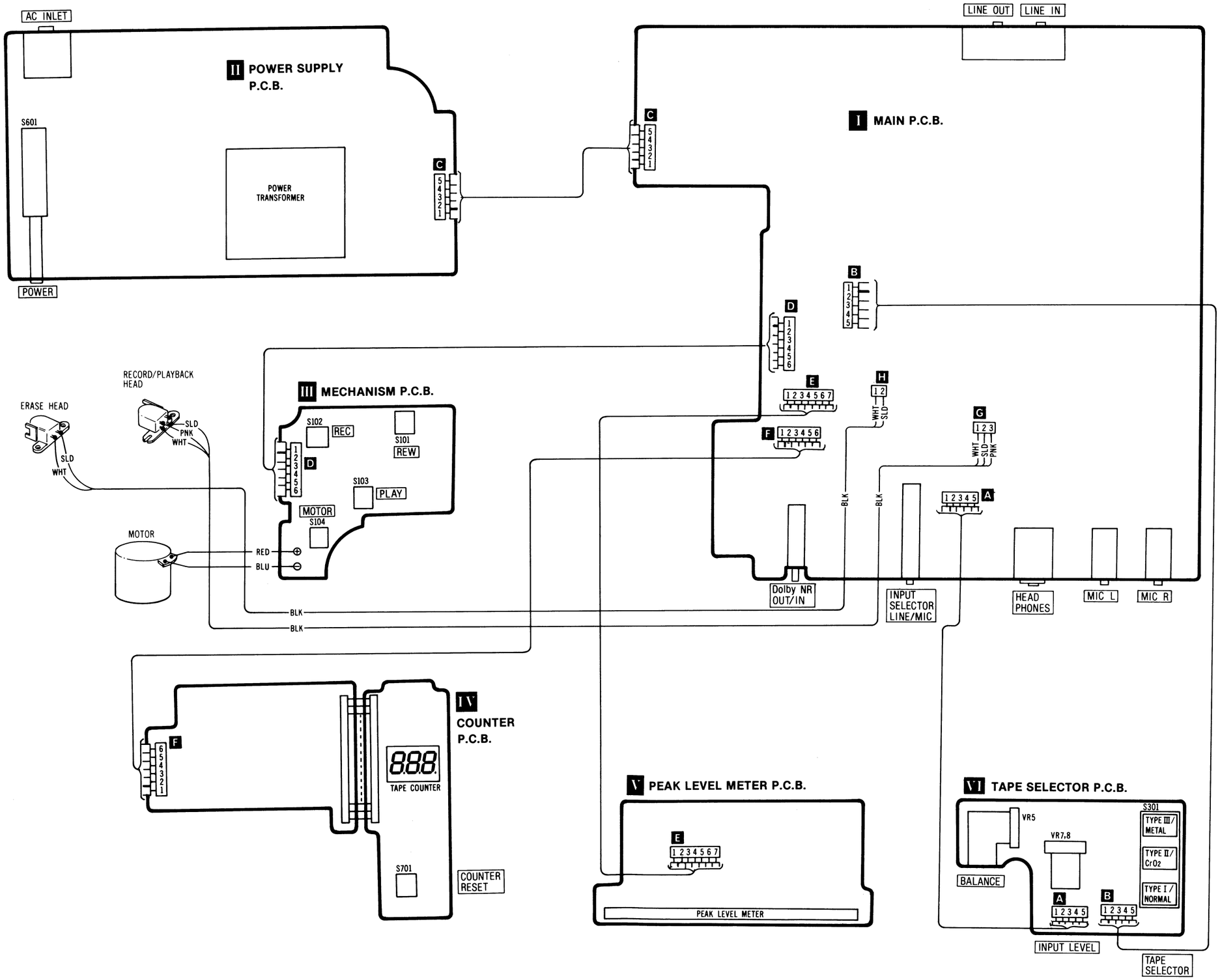


Fig. 9

■ WIRING CONNECTION DIAGRAM



■ RESISTORS AND CAPACITORS

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
2. Important safety notice. Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. The unit of resistance is OHM (Ω). K=1000Ω, M=1000kΩ
4. The unit of capacitance is MICROFARAD (μF). P=10⁻⁶μF.

Numbering System of Resistor

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W	J : ±5%
ERG : Metal Oxide	25 : 1/4W	G : ±2%
ERC : Solid	2F : 1/4W	K : ±10%
	S2 : 1/4W	
	S1 : 1/2W	
	12 : 1/2W	

Numbering System of Capacitor

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA...N : Non-polar Electrolytic	2R3 : 2.3V	05 : 50V DC	C : ±0.25pF
ECEA : Electrolytic	DC	1H : 50V DC	J : ±5%
ECCD : Ceramic	OJ : 6.3V	1 : 125V DC	K : ±10%
ECKD : Ceramic	1C : 16V	2H : 500V DC	Z : +80%, −20%
ECQM : Polyester	1E : 25V	KC : 400V AC	M : ±20%
ECQV : Polyester	1V : 35V		
ECQP : Polyester	1H : 50V		
ECKF : Ceramic	50 : 50V		
	25 : 25V		
	2A : 100V		

• RESISTORS

Ref. No.	Part No.	Value	Ref. No.	Part No.	Value	Ref. No.	Part No.	Value
R1, 2	ERDS2TJ101	100	R80	ERDS2TJ222	2.2k	R307	ERDS2TJ561	560
R3, 4	ERDS2TJ155	1.5M	R81, 82	ERDS2TJ222	2.2k	R308	ERDS2TJ221	220
R5, 6	ERDS2TJ104	100k	R83, 84	ERDS2TJ472	4.7k	R309	ERD2FCG820	82
R7, 8	ERDS2TJ101	100	R85, 86	ERDS2TJ223	22k	R311	ERDS2TJ473	47k
R9, 10	ERDS2TJ820	82	R87, 88	ERDS2TJ393	39k	R313	ERDS2TJ391	390
R11, 12	ERDS2TJ562	5.6k	R89, 90	ERDS2TJ682	6.8k	R401	ERDS2TJ242	2.4k
R13, 14	ERDS2TJ274	270k	R91, 92	ERDS2TJ272	2.7k			
R15, 16	ERDS2TJ472	4.7k	R95, 96	ERDS2TJ221	220	R451, 452	ERDS2TJ184	180k
R17	ERDS2TJ103	10k				R453, 454	ERDS2TJ274	270k
R18	ERD25FJ103	10k	R97, 98	ERDS2TJ223	22k	R455, 456	ERDS2TJ473	47k
			R99, 100	ERDS2TJ331	330	R457, 458	ERDS2TJ472	4.7k
R19, 20	ERDS2TJ104	100k	R101	ERDS2TJ473	47k	R461, 462	ERDS2TJ473	47k
R22	ERDS2TJ473	47k	R105, 106	ERDS2TJ103	10k	R463, 464	ERDS2TJ332	3.3k
R23	ERD25TJ333	33k	R113, 114	ERDS2TJ102	1k	R468	ERD25FJ242	2.4k
R24	ERDS2TJ103	10k	R115, 116	ERDS2TJ473	47k	R470	ERDS2TJ103	10k
R26	ERD25FJ220	22	R119, 120	ERDS2TJ184	180k	R471	ERDS2TJ102	1k
R27, 28	ERD25FJ101	100	R121, 122	ERD25FJ102	1k	R472	ERD25TJ105	1M
R29, 30	ERDS2TJ101	100	R123, 124	ERDS2TJ151	150			
R31, 32	ERDS2TJ273	27k	R125, 126	ERDS2TJ560	56	R601, 602	ERDS2TJ681	680
R33	ERDS2TJ222	2.2k				R701	ERDS2TJ102	1k
R35	ERDS2TJ103	10k	R128	ERDS2TJ102	1k	R703	ERDS2TJ472	4.7k
			R129, 130	ERDS2TJ103	10k	R705	ERDS2TJ683	68k
R37, 38	ERDS2TJ155	1.5M	R131	ERDS2TJ103	10k	R706	ERD25TJ333	33k
R39, 40	ERDS2TJ683	68k	R201	ERG1SJ470	47	R707, 708	ERDS2TJ472	4.7k
R43, 44	ERDS2TJ473	47k	R202	ERG12SJ680	68	R711	ERDS2TJ102	1k
R45, 46	ERDS2TJ273	27k	R217	ERDS2TJ272	2.7k	R721, 722	ERDS2TJ912	9.1k
R47, 48	ERDS2TJ102	1k	R218	ERDS2TJ103	10k	R723, 724	ERDS2TJ103	10k
R49, 50	ERDS2TJ122	1.2k	R220	ERDS2TJ272	2.7k	R725	ERDS2TJ102	1k
R51, 52	ERDS2TJ154	150k	R221	ERDS2TJ333	33k			
R53, 54	ERD25FJ222	2.2k	R222	ERDS2TJ153	15k	R729	ERDS2TJ103	10k
R63, 64	ERDS2TJ561	560				R731, 732	ERDS2TJ273	27k
R65, 66	ERDS2TJ103	10k	R223	ERDS2TJ101	100	R733, 734	ERDS2TJ222	2.2k
			R301	ERD25FJ1R0	1	R735, 736	ERDS2TJ102	1k
R68	ERDS2TJ562	5.6k	R303, 304	ERDS2TJ223	22k	R751	ERDS2TJ560	56
R79	ERD25FJ222	2.2k	R305, 306	ERDS2TJ100	10			

• CAPACITORS

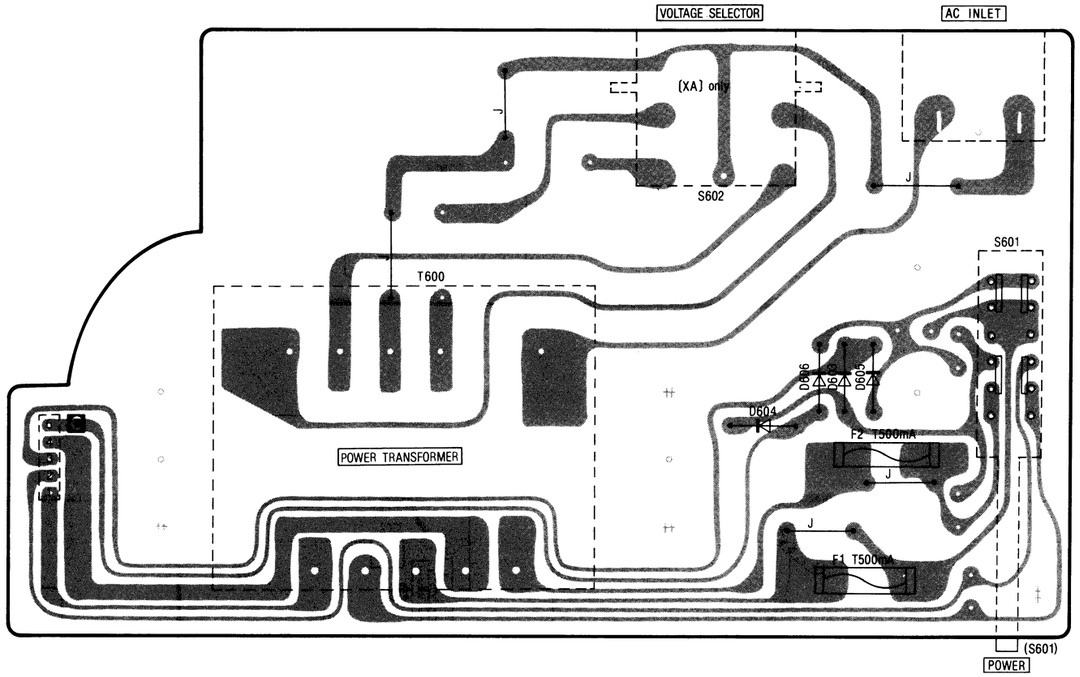
Ref. No.	Part No.	Value	Ref. No.	Part No.	Value	Ref. No.	Part No.	Value
C1, 2	ECKD1H122KB	0.0012	C67, 68	ECQB1H562KZ	0.0056	C455, 456	ECQV1H473JZ	0.047
C3, 4	RCBS1H681KBY	680p	C69, 70	ECQB1H472KZ	0.0047	C457, 458	ECQB1H333JZ	0.033
C5, 6	RCBS1H101KBY	100p	C71, 72	ECQB1H392KZ	0.0039	C459, 460	RCBS1H221KBY	220p
C7, 8	ECEA0JU101	100	C73, 74	ECEA1HU010	1	C461, 462	ECQB1H472JZ	0.0047
C9, 10	RCBS1H681KBY	680p	C75, 76	RCBS1H561KBY	560p	C463, 464	ECEA1EU4R7	4.7
C11, 12	ECQB1H123JZ	0.012	C77, 78	RCBS1H121KBY	120p	C466	ECEA1CU100	10
C13, 14	ECEA1CU100	10	C83, 84	ECCD1H220J	22p	C601, 602	ECBT1E223ZF	0.022
C18	ECEA1HU010	1	C101, 102	ECCD1H101J	100p	C603, 604	ECEA1CU221	220
C31, 32	ECEA1CU100	10	C103	ECEA1CU100	10	C605, 606	ECEA1CU222	2200
C33, 34	RCBS1H101KBY	100p	C104	ECEA1CU331	330	C701	ECEA1CU470	47
C35, 36	ECCD1H220J	22P	C301	ECQP1153JZ	0.015	C702	ECKD1H122KB	0.0012
C37, 38	ECEA1HU010	1	C302	ECEA1EU4R7	4.7	C703	ECEA1HU2R2	2.2
C39, 40	ECBT1E223ZF	0.022	C303, 304	ECQB1H562KZ	0.0056	C705	ECEA1HU2R2	2.2
C41, 42	ECEA1HUR22	0.22	C305, 306	ECQB1H472KZ	0.0047	C706	RCBS1H221KBY	220p
C43, 44	RCBS1H221KBY	220p	C308	ECEA1CN100	10	C721, 722	ECQV1H563JZ	0.056
C47, 48	ECEA1CU221	220	C309	ECEA1AU220	22	C727, 728	ECEA1CU330	33
C53, 54	ECEA1CU100	10	C310	ECEA1HU010	1	C731	ECBT1E223ZF	0.022
C61, 62	ECEA1HU2R2	2.2	C450	ECEA1HU010	1	C732	ECEA1CU220	22
C63, 64	ECQB1H222KZ	0.0022	C451, 452	ECQV1H104JZ	0.1			
C65, 66	ECQB1H682KZ	0.0068	C453, 454	ECQV1H334JZ	0.33			

1 2 3 4 5

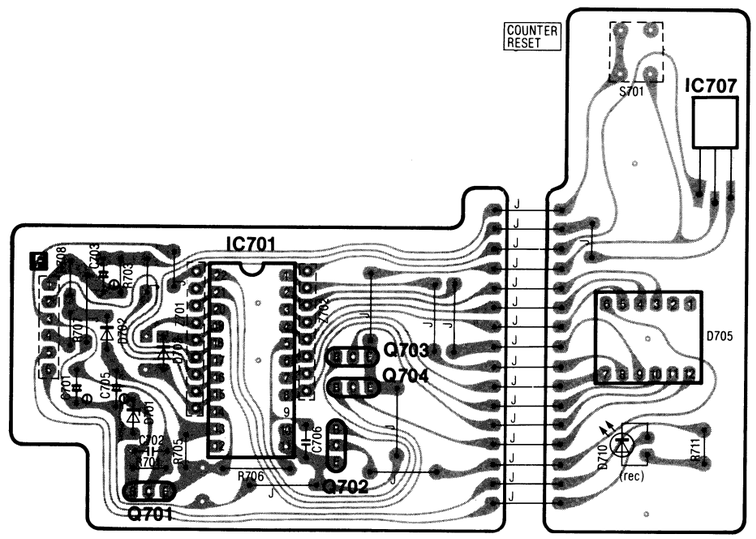
A B C D E F

■ PRINTED CIRCUIT BOARDS

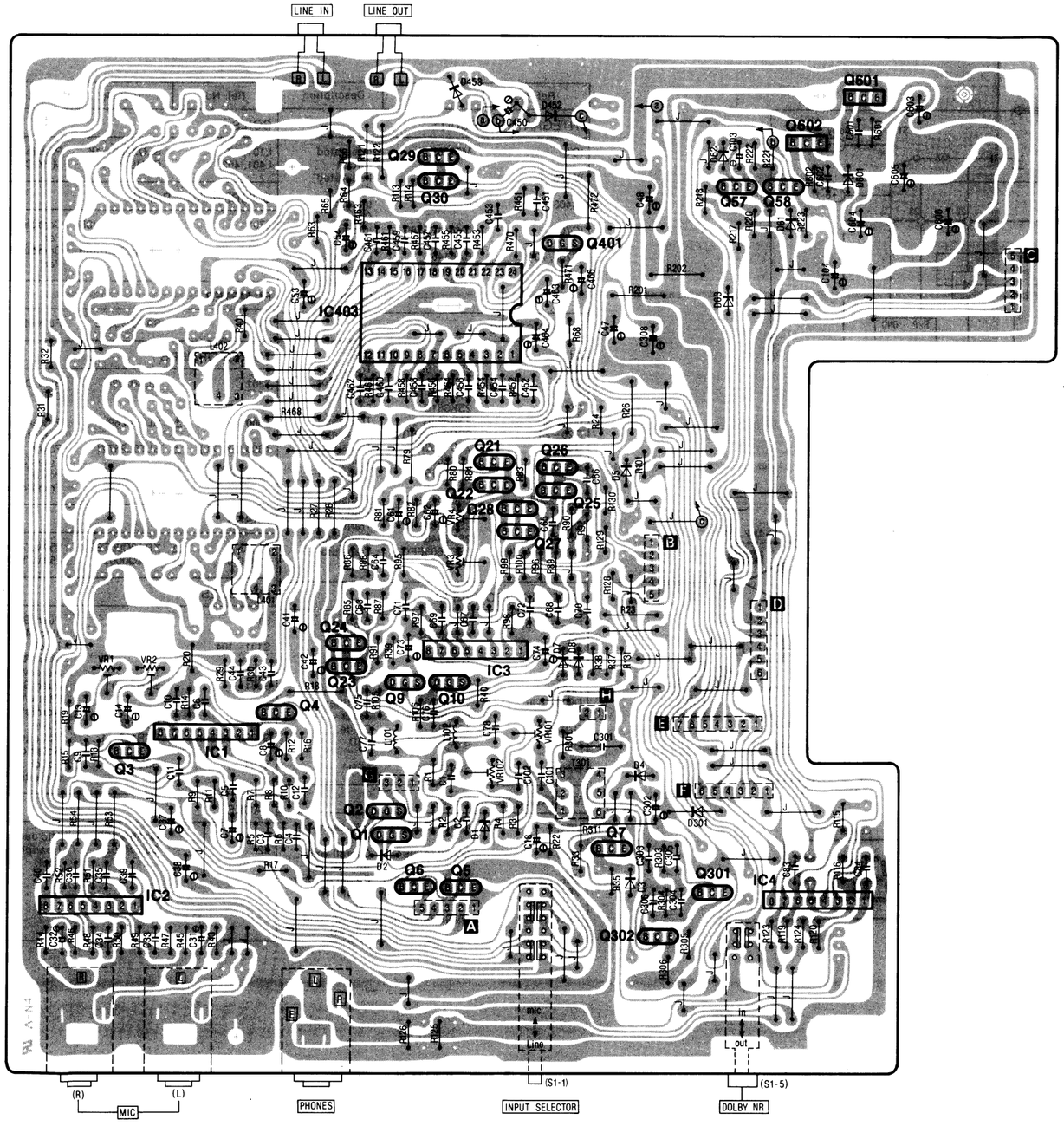
II POWER SUPPLY P.C.B.



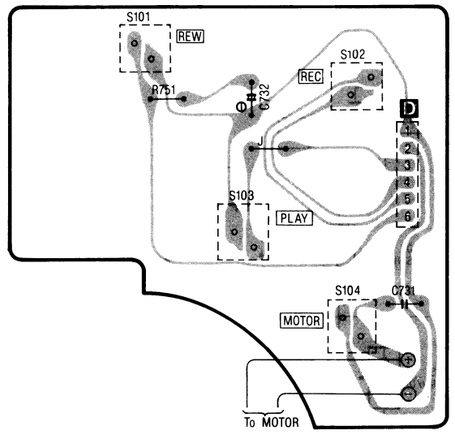
IV COUNTER P.C.B.



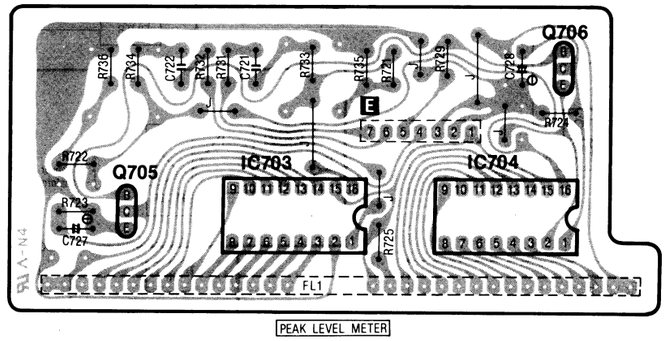
I MAIN P.C.B.



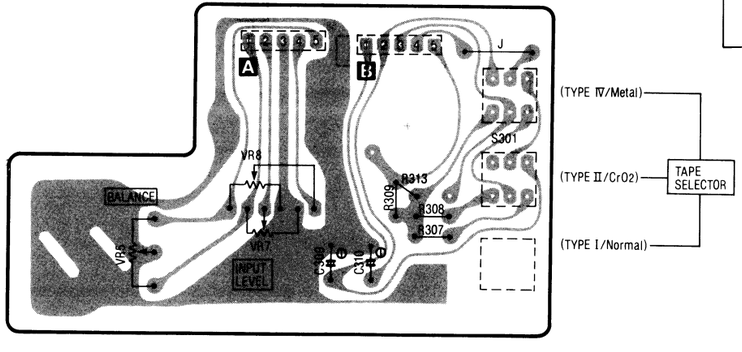
III MECHANISM P.C.B.



V PEAK LEVEL METER P.C.B.



VI TAPE SELECTOR P.C.B.



■ TERMINAL GUIDE OF TRANSISTORS, DIODES AND IC'S

NE657N	24 Pin
LM6417E589	22 Pin
BA6146	16 Pin

M5218L
M5220L

DN6838-A
1. Vin
2. GND
3. Vout

2SA1115E
E C B

2SB894Q
B C E

2SD1265-O
B C E

UN4113
E C B R1 R2 B C E

2SB744R
E C B

2SJ40D, 2SK381D
2SC2603EFG
S G D

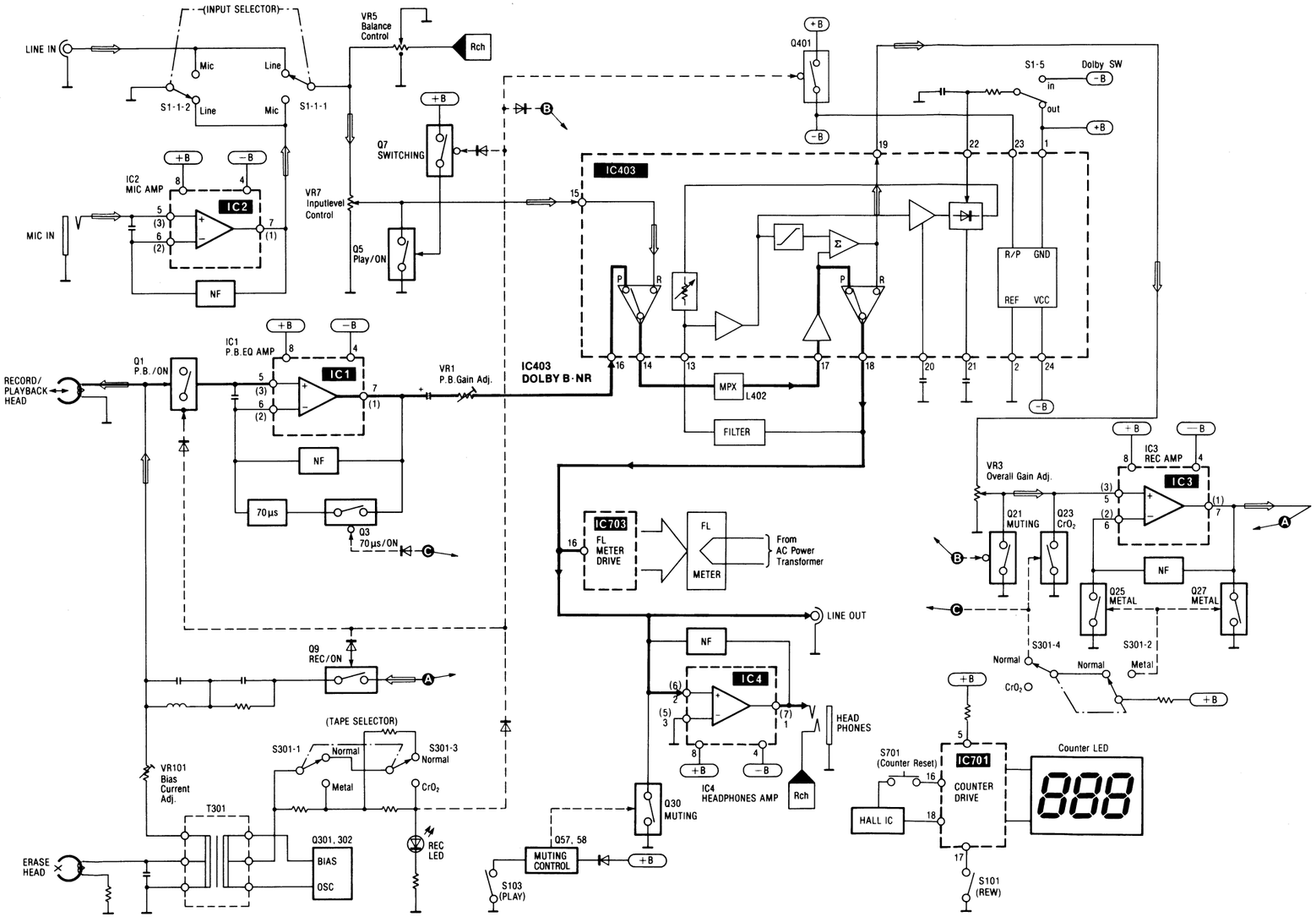
1SS133
1SR35200A
1S2473
Anode
Cathode
Ca A

MTZ5R6BT77
MTZ8R2B
MTZ20BT77
Anode
Cathode
Ca A

SLV31VC3
Anode
Cathode
Ca A

2SC3311
2SD1450R
E C B

■ BLOCK DIAGRAM



■ ELECTRICAL PARTS LIST

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC1	M5220L	Integrated Circuit
IC2, 3, 4	M5218L	Integrated Circuit
IC403	NE657N	Integrated Circuit
IC701	LM6417E589	Integrated Circuit
IC703, 704	BA6146	Integrated Circuit
IC707	DN6838 – A	Integrated Circuit
TRANSISTORS		
Q1, 2	2SJ40D	FET
Q3, 4	2SA1115E	Transistor
Q5, 6	2SC2603EFG	Transistor
Q7	UN4113	Transistor
Q9, 10	2SK381D	FET
Q21, 22	2SB894R	Transistor
Q23 ~ 28	2SC2603EFG	Transistor
Q29, 30	2SD1450R	Transistor
Q57	2SC2603EFG	Transistor
Q58	2SA1115E	Transistor
Q301, 302	2SC3311 – Q	Transistor
Q401	2SJ40D	Transistor
Q601	2SD1265 – 0	Transistor
Q602	2SB744Q	Transistor
Q701 ~ 704, 705, 706	2SC2603EFG	Transistor
DIODES & RECTIFIERS		
D1 ~ 5, 7, 8, 61, 62	1SS133	Diode
D63	MTZ8R2B	Zener
D301	1S2473	Diode
D452	1S2473	Diode
D453	1SS133	Diode
D601	⚠ MTZ20BT77	Zener
D603 ~ 606	⚠ 1SR35200	Rectifier
D701	MTZ5R6BT77	Zener
D702, 703	1SS133	Diode
D705	SVGLB203DN1	LED
D710	SLV31VC3	LED
VARIABLE RESISTORS		
VR1, 2	QVNB3A00B223	P.B. Gain Adj. VR
VR3, 4	QVNB3A00B473	Overall Gain Adj. VR
VR5	EWHFDAF15G25	Balance Control
VR7, 8	EWC5SA000A54	Input Level Control
VR101, 102	QVNB3A00B104	Bias Current Adj. VR

Ref. No.	Part No.	Description
COILS		
L101, 102	SLQX303 – 1K	Peaking Coil
L401, 402	QLM9Z10K	MPX Coil
COMBINATION PARTS		
Z701	EXBF9E822J8R	Combination Part
Z702	EXBF8E561J4R	Combination Part
FL METER		
FL1	SADBG368Z	FL Meter
TRANSFORMERS		
T301	QLB0202K	Bias Oscillation Coil
T600 [XA]	⚠ SLT5L269W	Power Transformer
T600 [EK, XL]	⚠ SLT5L267W	Power Transformer
T600 [other]	⚠ SLT5L268W	Power Transformer
FUSES		
F1 [EK]	⚠ XBA2C05TB0	250V, T500mA
F1 [other]	⚠ XBAQ0003	250V, T500mA
SWITCHES		
S1	SSH3701	Push Switch (Iinc/Mic)
S101 ~ 104	SSP83	Tutch Switch (Rew/Rec/ Mute/Motor)
S301	SSH2109	Push Switch (Metal/CrO_2/ Normal)
S601	⚠ SSH1069	Power Switch
S602 [XA] only	⚠ SSR187 – 1	Voltage Selector
S701	SSG13	Touch Switch (Counter Reset)
JACKS		
J1	QJA0454ZC	Mic Jack
J2	QJA0455ZC	Headphones Jack

■ SCHEMATIC DIAGRAM

Notes:

(This schematic diagram may be modified at any time with the development of new technolgy.)

* This is the basic circuit diagram of this unit.
  Note that part of the circuit is subject to change depending on the

- **S1-1-1～S1-1-4**: Input selector switch in "**line**" position.
- **S1-5** : Noise reduction switch in "**OUT**" position.
- **S101** : REW switch in "**OFF**" position.
- **S102** : REC switch in "**OFF**" position.
- **S103** : MUTE switch in "**OFF**" position.
- **S104** : Motor switch in "**OFF**" position.
- **S301** : Tape selector switch in "**TYPE Ⅰ/Normal**" position. (TYPE Ⅳ/Metal ↔ TYPE Ⅲ/CrO_2 ↔ TYPE Ⅰ/Normal)
- **S601** : Power switch in "**ON**" position.
- **S602** : **Voltage selector in "240V" position. ([XA] only)**
- **S701** : Counter reset switch.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise. 1K=1,000(Ω), 1M=1,000k(Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
  ( ).....Voltage values at record mode.
  CrO_2.....Voltage values at CrO_2 tape mode.
  Metal.....Voltage values at Metal tape mode.
  B.....Voltage values at Dolby B NR mode.
  For measurement use EVM.
- (▬▬) indicates B (bias).
- (▒▒) indicates the flow of the playback signal.
- (⟹) indicates the flow of the record signal.
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

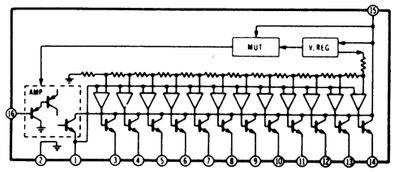
* Caution !

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

* Cover the parts boxes made of plastics with aluminum foil.
* Ground the soldering iron.
* Put a conductive mat on the work table.
* Do not touch the legs of IC or LSI with the fingers directly.

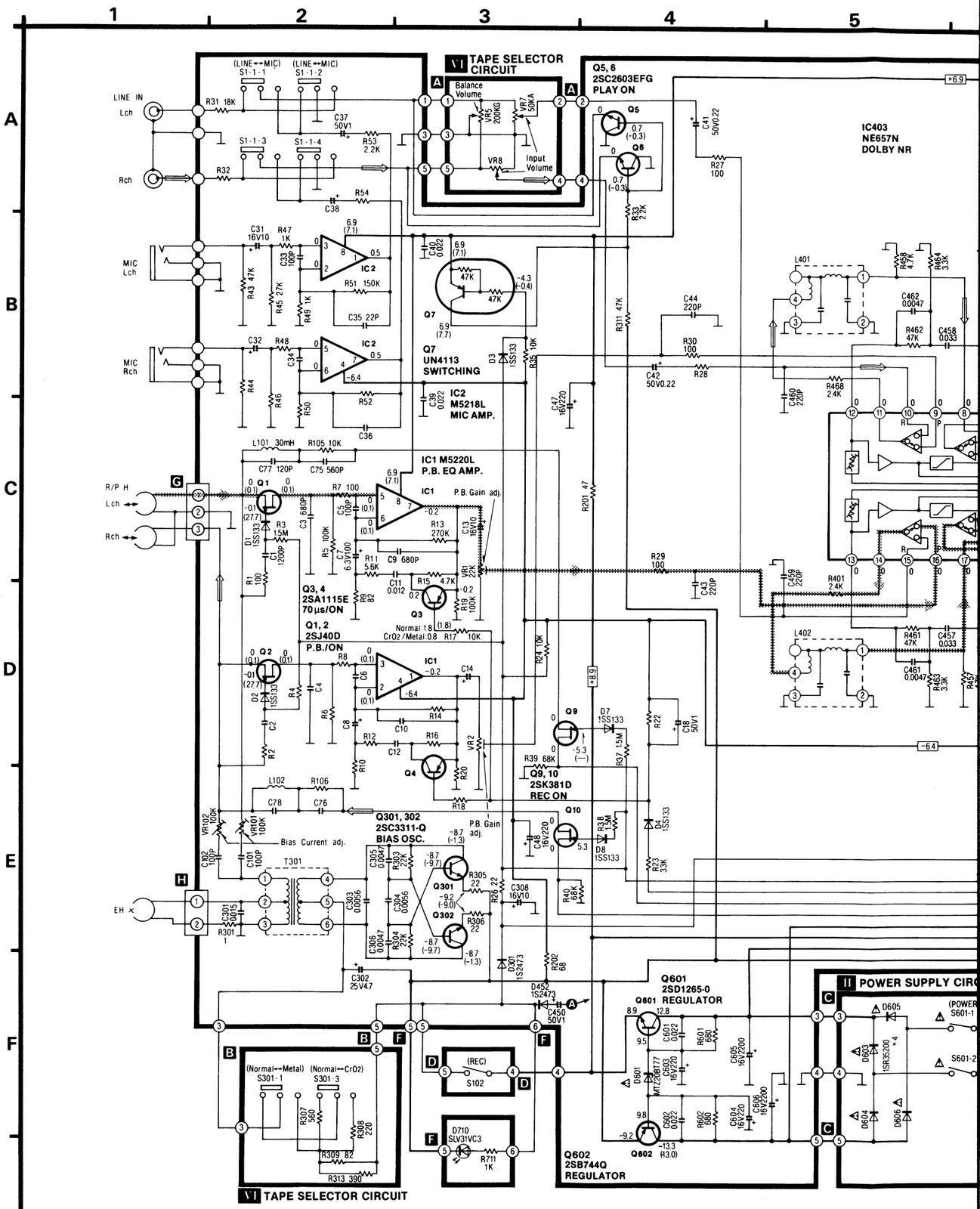
■ EQUIVALENT CIRCUIT

IC703, 704: BA6146



SPECIFICATIONS * Input level control ...MAX

Playback S/N ratio * Test tape...QZZCFM	Greater than 45dB
Overall distortion * Test tape ...QZZCRA for Normal ...QZZCRX for CrO_2 ...QZZCRZ for Metal	Normal..... Less than 3.5% CrO2, Metal..... Less than 4%
Overall S/N ratio * Test tape...QZZCRA	Greater than 43dB (without NAB filter)



IC403
NE657N
DOLBY NR

IC3
M5218L
REC AMP

Overall Gain adj.

Q21, 22
2SB894R
MUTING

Q23, 25, 27 2SC2603EFG
CrO_2/METAL
SWTICHING

Q24, 26, 28
2SC2603EFG
CrO_2/METAL
SWTICHING

Overall Gain adj.

Q57
2SC2603EFG
MUTING CONTROL

Q58
2SA1115E
MUTING CONTROL

Q401
2SJ40D
SWITCHING

Q29, 30
2SD1450R
MUTING

IC4
M5218L
HEADPHONES AMP

LINE OUT Lch

HEADPHONES

LINE OUT Rch

I MAIN CIRCUIT

V PEAK LEVEL METER CIRCUIT

IC703, 704
BA6146
METER DRIVE

Q705, 706 2SC2603EFG SWITCHING

II POWER SUPPLY CIRCUIT

III MECHANISM CIRCUIT

IC707
DN6838-A
HALL

IC701
LM6417E589
COUNTER DRIVE

Q701~704
2SC2603EFG
SWITCHING

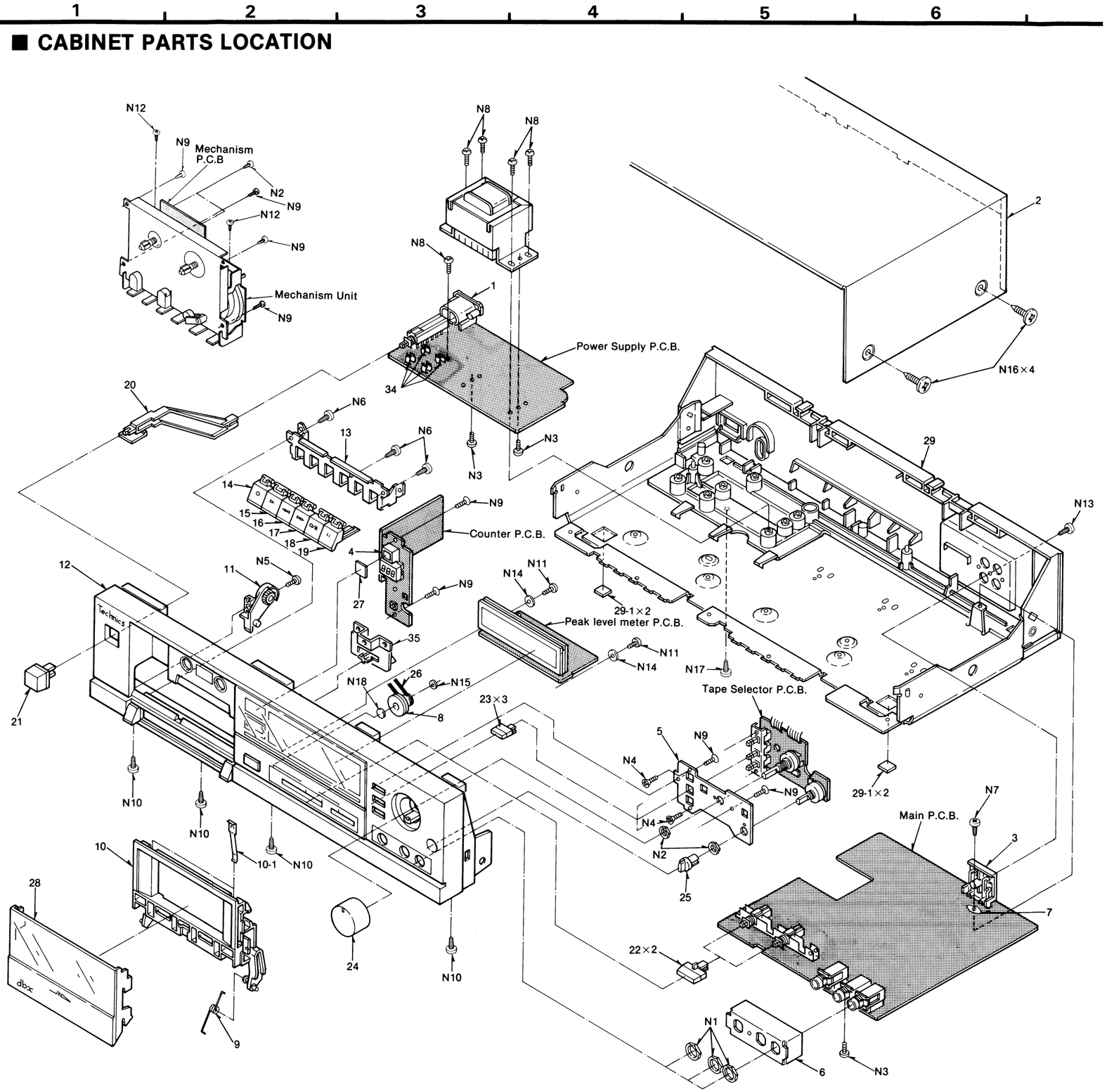
IV COUNTER CIRCUIT

• REPLACEMENT PARTS LIST

Notes:
- Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  When replacing any of these components, use only manufacturer's specified parts.
- Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.
- **Ⓚ-marked parts are used for black only, while ○-marked parts are for silver type only.**
- **Part other then Ⓚ- and ○-marked are use for both black and silver type.**
- **The parenthesized numbers in the column of description stand for the quantity per set.**

Ref. No.		Part No.	Description	
CABINET and CHASSIS PARTS				
1 [XL]	⚠	SJS9237	AC Inlet	(1)
1 [other]	⚠	SJS9236	AC Inlet	(1)
2	○	SKC1920S98	Case Cover	(1)
2	Ⓚ	SKC1920K99	Case Cover	(1)
3		SJF3057N	Terminal Plate	(1)
4		SMPM11	LED Holder	(1)
5		SMN2000	Volume Angle	(1)
6		QMA4779	MIC Angel	(1)
7		SNE55	Earth Plate	(1)
8		SXDM24	Counter Pulley Ass'y	(1)
9		SUS797 – 1	Holder Spring	(1)
10		SGXSD225W – KM	Cassette Holder Ass'y	(1)
[10-1		[QBP2006A	Tape Pressure Spring	(2)
11		SGXSD250 – SE	Damper Gear Ass'y	(1)
12	○	SGYSB106 – SE	Front Panel Ass'y	(1)
12	Ⓚ	SGYSB106 – KE	Front Panel Ass'y	(1)
13		SMN2001 – 1	Button Angle	(1)
14	○	SBC801A – 1	Rec Button	(1)
14	Ⓚ	SBC801A	Rec Button	(1)
15	○	SBC802A – 1	Play Button	(1)
15	Ⓚ	SBC802A	Play Button	(1)
16	○	SBC803A – 1	Rew Button	(1)
16	Ⓚ	SBC803A	Rew Button	(1)
17	○	SBC804A – 1	ff Button	(1)
17	Ⓚ	SBC804A	ff Button	(1)
18	○	SBC805A – 1	Stop Button	(1)
18	Ⓚ	SBC805A	Stop Button	(1)
19	○	SBC806A – 1	Pause Button	(1)
19	Ⓚ	SBC806A	Pause Button	(1)
20		SUB255	Power Rod	(1)
21	○	SBC666	Power Button	(1)
21	Ⓚ	SBC666 – 3	Power Button	(1)
22	○	SBC723 – 4	Push Button	(2)
22	Ⓚ	SBC723 – 1	Push Button	(2)
23	○	SBC799 – 1	Select Button	(3)
23	Ⓚ	SBC799	Select Button	(3)
24	○	SBN1204 – 1	Input Volume Knob	(1)
24	Ⓚ	SBN1204	Input Volume Knob	(1)
25	○	SBN1205 – 1	Balance Volume Knob	(1)
25	Ⓚ	SBN1205	Balance Volume Knob	(1)
26		QDB0143 – 2	Counter Belt	(1)
27		SHRM6	Sheet	(1)
28	○	SYKM30	Cassette Lid Ass'y	(1)
28	Ⓚ	SYKM31	Cassette Lid Ass'y	(1)
29 [E]		SKMSB106 – KE	Main Case Ass'y	(1)
29 [EK]		SKMSB106 – KK	Main Case Ass'y	(1)
29 [XA]		SKMSB106 – KA	Main Case Ass'y	(1)
29 [XL]		SKMSB106 – KL	Main Case Ass'y	(1)
29 [other]		SKMSB106 – KG	Main Case Ass'y	(1)
[29-1		[SKL293	Case Foot	(4)
30		QJT1054	Contact	(5)
31		SJT30543 – V	5 Pin Connector	(1)
31		SJT30643 – V	6 Pin Connector	(1)
32		QJP1920TN	2 Pin Plug	(1)
32		QJP1921TN	3 Pin Plug	(1)
33		QJS1920TN	2 Pin Socket	(1)
33		QJS1921TN	3 Pin Socket	(1)
34		QTF1054	Fuse Holder	(4)
35	○	SBC798 – 1	Button	(1)
35	Ⓚ	SBC798	Button	(1)
SCREWS, NUTS & WASHERS				
N1		QNQ1070	Nut	(3)
N2		XNS8	Nut	(2)
N3		XTV3 + 6BFN	Tapping Screw ⊕3×6	(3)
N4		XSS3 + 6S	Screw ⊕3×6	(2)
N5		XTV3 + 10BFN	Tapping Screw ⊕3×10	(1)
N6		XTB26 + 8J	Tapping Screw ⊕2.6×8	(3)
N7		XTBS3 + 8JFZ1	Tapping Screw ⊕3×8	(1)
N8		XTV3 + 12G	Tapping Screw ⊕3×12	(5)
N9		XTV3 + 8JR	Tapping Screw ⊕3×8	(8)
N10		XTB3 + 8BFN	Tapping Screw ⊕3×8	(4)
N11		XTN3 + 10B	Tapping Screw ⊕3×10	(2)
N12		XTB3 + 6FR	Tapping Screw ⊕3×6	(2)
N13		XTB3 + 12BFZ	Tapping Screw ⊕3×12	(1)
N14		XWG3	Washer 3φ	(2)
N15		QBW2008	Washer	(1)
N16	○	SNE2125	Ornament Screw	(4)
N16	Ⓚ	SNE2125 – 1	Ornament Screw	(4)
N17		XTB3 + 10BFZ	Tapping Screw ⊕3×10	(1)
N18		SHWM24H70	Washer	(1)
ACCESSORIES				
A1 [EK]		SQFM54	Instruction Book	(1)
A1 [EG]		SQFM55	Instruction Book	(1)
A1 [other]		SQFM53	Instruction Book	(1)
A2 [XA]	⚠	SJA168 – 1	AC Power Cord	(1)
A2 [XL]	⚠	SJA173	AC Power Cord	(1)
A2 [EK]	⚠	SFDAC05G02	AC Power Cord	(1)
A2 [other]	⚠	SJA171	AC Power Cord	(1)
A3		SJP2264	Pin Cord	(1)
A4 [XA] only	⚠	SJP9215	Plug	(1)
PACKINGS				
P1 [EK]	○	SPGM83	Carton Box	(1)
P1 [EK] (K)		SPGM82	Carton Box	(1)
P1 [XA]		SPGM84	Carton Box	(1)
P1 [other]	○	SPGM81	Carton Box	(1)
P1 [other]	Ⓚ	SPGM80	Carton Box	(1)
P2		SPSM13	Cushion (L)	(1)
P3		SPSM14	Cushion (R)	(1)
P4		SPSM15	Pad	(1)
P5		XZB40X60A02	Poly Bag	(1)
P6		XZB18X15C05	Poly Bag (Accessories)	(1)

■ CABINET PARTS LOCATION



REPLAC

Ref. No.
MECHA
101
102
103
104
105
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107
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117

■ MECHANICAL PARTS LOCATION

NOTES:

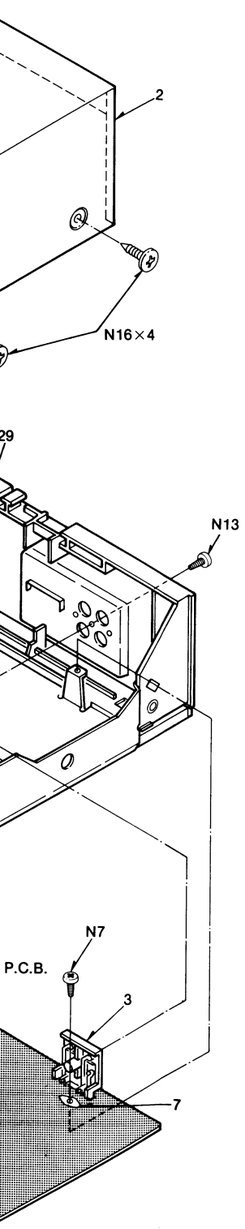
- When changing mechanism parts. apply the specified grease to the are marked "××" shown in the drawing "Mechanical Parts Location".

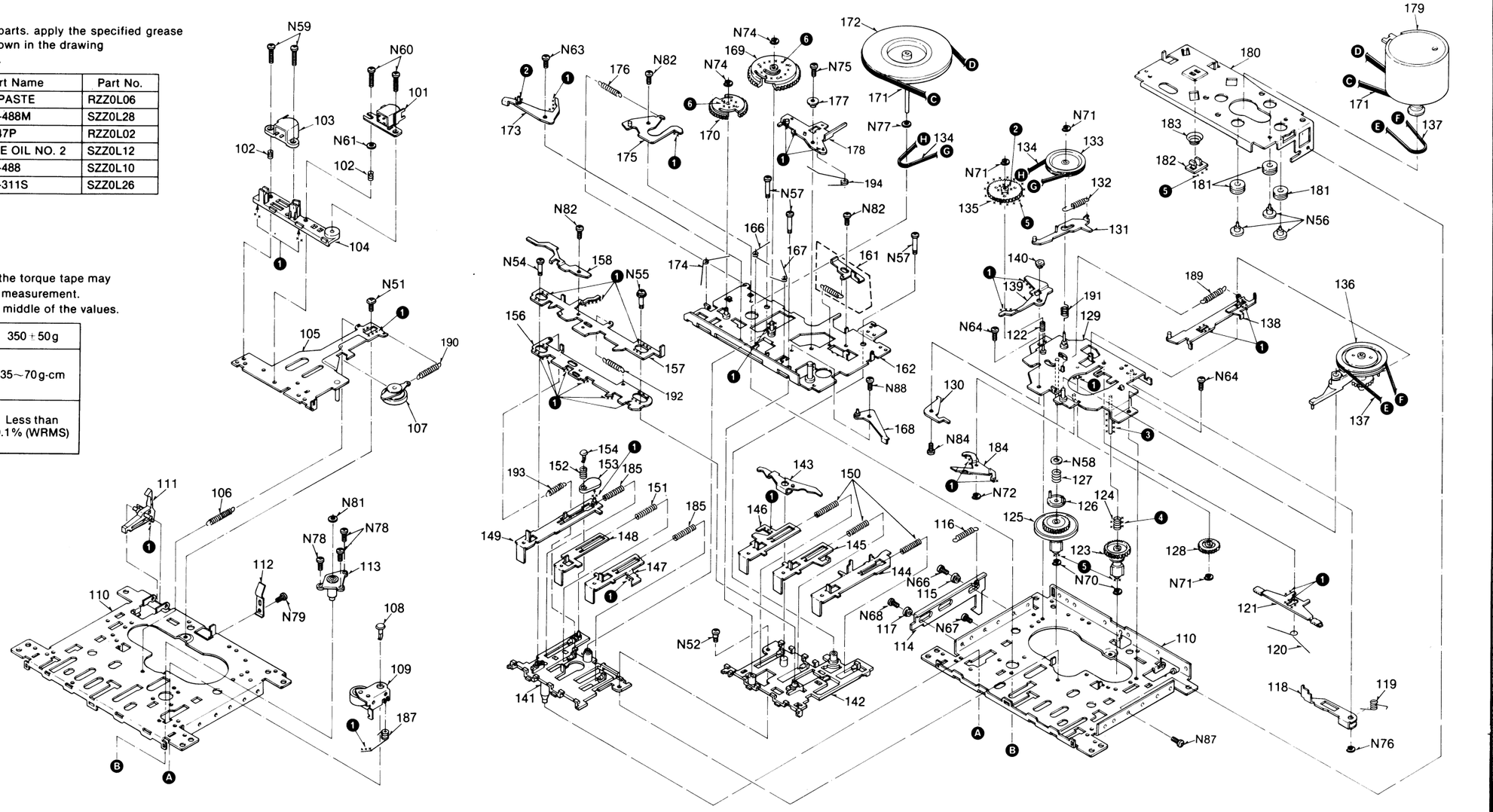
Ref. No.	Part Name	Part No.
❶	ROCOL PASTE	RZZ0L06
❷	FLOIL G-488M	SZZ0L28
❸	FLOIL 947P	RZZ0L02
❹	SILICONE OIL NO. 2	SZZ0L12
❺	FLOIL G-488	SZZ0L10
❻	FLOIL G-311S	SZZ0L26

SPECIFICATIONS

NOTE: The value indicated by the torque tape may fluctuate during torque measurement. In that case, obtain the middle of the values.

Pressure of pressure roller	350 ± 50g
Takeup tension * Use cassette torque meter..... QZZSRKCT	35~70g-cm
Wow and flutter; (JIS) * Use test tape ..... QZZCWAT	Less than 0.1% (WRMS)





REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	
MECHANISM PARTS			
101	QWY4165G	R.P Head	(1)
102	SMQ4596	Head Spring	(2)
103	QWY2138G	E Head	(1)
104	SMQ4768	Head Base	(1)
105	RFD135Z	Head Panel Ass'y	(1)
106	SMQ4770	Head Panel Spring	(1)
107	SMQ4772	Take Up Roller Shaft Ass'y	(1)
108	SMQ4774	Function Lever Stopper	(1)
109	SMQ4776-1	Pinch Roller Arm Ass'y	(1)
110	SMQT1458	Chassis	(1)
111	SMQ4778	REC Safety Lever	(1)
112	SMQ4780	Pack Hold Spring	(1)
113	SMQ4782	Flywheel Metal	(1)
114	RFY183Z	Eject Slider Lever	(1)
115	SMQ4786	Collar	(1)
116	SMQT1629	E.H, Base Spring	(1)
117	SMQ4788	Collar	(1)
118	SMQ4790	Control Lever	(1)
119	RFS379Z	Control Lever Spring	(1)
120	SMQ4792	Spring	(1)
121	SMQ4794	Brake Arm Ass'y	(1)
122	SMQT1630	Cam Gear Spring	(1)
123	SMQ4800	Supply Reel Ass'y	(1)
124	SMQT1636	Back Tension Spring	(1)
125	SMQ4804	Take Up Reel Ass'y	(1)
126	SMQ4806	Sensing Piece	(1)
127	SMQ4808	Sensing Piece Spring	(1)
128	SMQ4810	FF. Gear	(1)
129	RFU16Z	Reel Base Ass'y	(1)
130	SMQ4814	T. Roller Kick Lever	(1)
131	SMQ4818	Sensing Lever	(1)
132	SMQ4820	Sensing Lever Spring	(1)
133	SMQ4822	Pully	(1)
134	SMQ4824	Full Auto Belt	(1)
135	SMQ4826	Cam Gear	(1)
136	SMQT1583	RF Clutch Arm Ass'y	(1)
137	SMQT1584	RF Belt	(1)
138	SMQT1632	RF Slide Lever Ass'y	(1)
139	SMQ4834	Auto Lever	(1)
140	SMQ4938	Auto Lever Collar	(1)
141	SMQ4836	Button Base (L)	(1)
142	SMQ4840	Button Base (R)	(1)
143	SMQT1585	REC. Stopper	(1)
144	SMQT1586	REC. Button Lever	(1)
145	SMQ4846	Play Button Lever	(1)
146	SMQ4848	RWD Button Lever	(1)
147	SMQ4850	FF Button Lever	(1)
148	SMQ4852	Stop Button Lever	(1)
149	SMQ4854	Pause Button Lever	(1)
150	SMQ4856	Button Lever Spring	(3)
151	SMQ4858	Button Lever Spring	(1)
152	SMQ4860	Pause Lever Spring	(1)
153	SMQ2444	Pause Lever	(1)
154	SMQ4862	Stopper	(1)
156	SMQT1587	Push Button Function Lever	(1)
157	SMQT1589	Switch Function Lever	(1)
158	SMQ4872	E Kick Lever	(1)
161	SMQ4880	REC Function Lever Ass'y	(1)
162	SMQT1590	Sub Chassis Ass'y	(1)
166	SMQ4888	Main Gear Spring	(1)
167	SMQ4890	M. Trigger Arm Spring	(1)
168	SMQ4892	M. Trigger Arm Ass'y	(1)
169	SMQ4894	Main Gear	(1)
170	SMQ4896	P Gear	(1)
171	SMQT1591	Main Belt	(1)
172	SMQT1592	Flywheel Ass'y	(1)
173	SMQ4902	P. Trigger Arm Ass'y	(1)
174	SMQ4904	P. Trigger Arm Spring	(1)
175	SMQ4906	Pause Arm Ass'y	(1)
176	SMQ4909	Pause Arm Spring	(1)
177	SMQ4910	Lift Arm Collar	(1)
178	SMQT1593	Lift Arm Ass'y	(1)
179	SMQT1594	Motor Ass'y	(1)
180	SMQT1633	FM Hold Plate	(1)
181	SMQ4916	Motor Rubber	(3)
182	SMQT1595	Flywheel Patch Plate	(1)
183	SMQ4922	Damper Spring	(1)
184	SMQ4940	Kick Lever	(1)
185	SMQ4858	Button Lever Spring	(2)
187	SMQT1453	Pinch Roller Spring	(1)
189	RFS378Z	RF Slide Lever Spring	(1)
190	RFS249Z	Spring	(1)
191	SMQT1631	RF Clutch Arm Spring	(1)
192	RFS253Z	Spring	(1)
193	SMQT1588	Spring	(1)
194	RFS248Z	Spring	(1)
SCREWS and NUTS			
N51	SMQT1581	Collar Screw	(1)
N52	SMQ4838	Collar Screw	(1)
N54	SMQ4870	Collar Screw	(1)
N55	SMQ4878	Collar Screw	(1)
N56	SMQ4918	Collar Screw	(3)
N57	SMQ4942	Collar Screw	(3)
N58	SMQT1454	Polyslider Washer	(1)
N59	XSN2+8	Screw ⊕2×8	(2)
N60	SMQT1634	Screw ⊕2×7	(2)
N61	XWG2	Washer 2φ	(1)
N63	SMQT1582	Collar Screw	(1)
N64	XYN2+C4	Screw ⊕2×4	(2)
N66	XYN2+C5	Screw ⊕2×5	(1)
N67	XYN2+C5	Screw ⊕2×5	(1)
N68	XSN2+6	Screw ⊕2×6	(1)
N70	RFE133Z	E-Ring 1.5φ Special	(2)
N71	SMQ4930	Polyslider Washer	(3)
N72	XUC12FT	E-Ring 1.2φ	(1)
N74	XUC2FT	E-Ring 2.0φ	(2)
N75	XYN26+C6	Screw ⊕2.6×6	(1)
N76	XUC15FT	E-Ring 1.5φ	(1)
N77	SMQ4932	Polyslider Washer	(1)
N78	SMQ4934	Screw ⊕2×3	(3)
N79	XTN26+3	Screw ⊕2.6×3	(1)
N81	SMQ4936	Nylon Washer 2×5×0.5	(1)
N82	SMQ1582	Collar Screw	(3)
N84	SMQ4944	Collar Screw	(1)
N87	XYN2+C5	Screw ⊕2×5	(2)
N88	SMQ4168	Collar Screw	(1)

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Dolby NR-Equipped Stereo Cassette Deck

RS-B106

DEUTSCH

DEUTSCH

■ MESSUNGEN UND EINSTELL METHODEN

Meßinstrumente

- Elektronisches Voltmeter (EVM)
- Oszilloskop
- Digitaler Frequenzmesser
- Audiofrequenz-Oszillator
- Dämpfungswiderstand
- Gleichstrom-Voltmeter
- Wiederstand (600Ω)

Kopfazimut-Justierung

1. Die Anschlußverbindungen für die Testgeräte sind in Abb. 1 gezeigt.
2. Den Azimut-Justierungsteil (8kHz, −20dB) des Testbandes (QZZCFM) wiedergeben und die Winkeljustierungs-Einstellschraube so verstellen, daß der Ausgang vom linken und rechten Kanal maximal wird. (Wenn die Justierpositionen für den linken und rechten Kanal verschieden sind, ist eine Position zu finden, wo der Ausgang des linken und rechten Kanals ausgelichen ist, und dann ist die Justierung durchzuführen.)
3. Gleichzeitig eine Lissajous-Wellenform ziehen und Phasenablenkung eliminieren.
4. Nach erfolgter Justierung sind die Bandführungs-Höhen-und-Winkeljustierschrauben zu sichern.

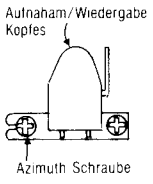

Abb. 2

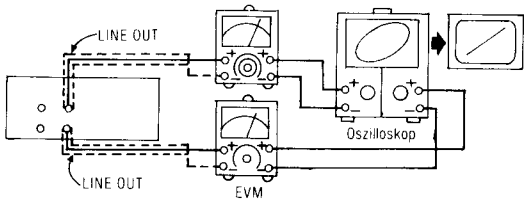

Abb. 1

Bandgeschwindigkeits-Justierung

1. Der Testaufbau ist in Abb. 3 gezeigt.
2. Den mittleren Teil des Testbandes (QZZCWAT) wiedergeben.
3. Den Drehwiderstand im Motor so justieren. daß die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: 3000±10Hz

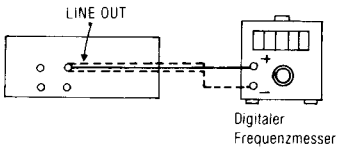

Abb. 3

Wiedergabe-Frequenzgang

1. Der Testaufbau ist in Abb. 4 gezeigt.
2. Den Wiedergabe-Frequenzgangteil (315Hz, 12,5kHz~63Hz, −20dB) des Testbandes (QZZCFM) wiedergeben.
3. Überprüfen, ob der Frequenzgang innerhalb des in Abb. 5 für den linken und rechten Kanal gezeigten Bereichs liegt.

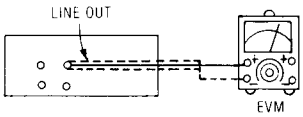

Abb. 4

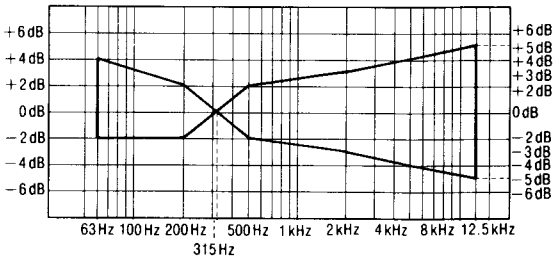

Abb. 5

Justierung des Wiedergabe-Verstärkungsgrades

1. Der Testaufbau ist in Abb. 4 gezeigt.
2. Den für den Wiedergabe-Verstärkungsgrad justierten Teil (315Hz, 0dB) des Testbandes (QZZCFM) wiedergeben.
3. Den Drehwiderstand 1, (linker Kanal) {Drehwiderstand 2 (rechter Kanal)} so justieren, daß die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: 0,4V±0,5dB (0,02V)

Gesamtfrequenzgang

1. Der Testaufbau ist in Abb. 6 gezeigt.
2. Den Bandsorten-Wahlschalter in die "Normal"-Position einstellen.
3. Eine Normalband-Leercassette (QZZCRA) einsetzen und aufnehmen, während ein Signal von nacheinander 50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz und 10kHz bei 20dB, abgeschwächt vom Referenz-Eingangspegelsignal (1kHz, −24dB) eingegeben wird.

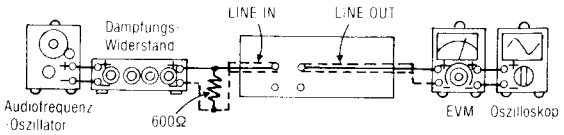

Abb. 6

4. Das in Schritt 2 aufgezeichnete Signal wiedergeben und prüfen, ob der Pegel jeder Ausgangsfrequenz im Bereich liegt, der in Abb. 7 im Vergleich zur Referenzfrequenz (1kHz) gezeigt wird.
5. Falls er nicht im Standard-Bereich liegt, ist der Vormagnetisierungs-strom mit Drehwiderstand 101 (linker Kanal) {Drehwiderstand 102 (rechter Kanal)} so zu justieren, daß der Frequenzpegel innerhalb des Standards zu liegen kommt.
   - Erhöhter Pegel im Frequenzbereich..... Den Vormagnetisierungsstrom erhöhen.
   - Reduzierter Pegel im Frequenzbereich..... Den Vormagnetisierungsstrom senken.
6. Anschließend das auf der CrO_2-Leerband-Cassette (QZZCRX) und der Reineisenband-Leercassette (QZZCRZ) aufgezeichnete Signal auf 12,5kHz erhöhen und auf gleiche Weise justieren, wie vorgehend beschrieben. Dann überprüfen, ob der Frequenzpegel innerhalb des in Abb. 8 gezeigten Bereichs liegt.

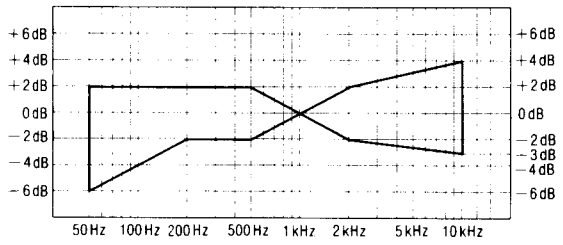

Abb. 7

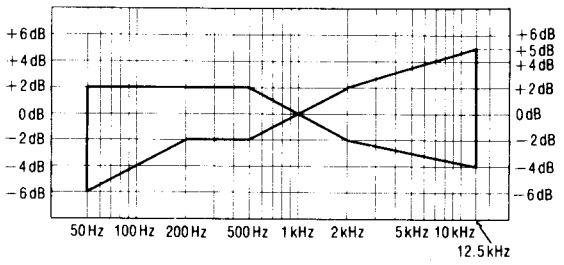

Abb. 8

Justierung des Gesamtverstärkungsgrades

1. Der Testaufbau ist in Abb. 6 gezeigt.
2. Den Bandsorten-Wahlschalter in die "Normal"-Position einstellen.
3. Eine Normalband-Leercassette (QZZCRA) einsetzen und im Aufnahmepause-Zustand des Gerätes das Referenzsignal (1kHz, −24dB) eingeben.
4. Die Ausgangsleistung mit dem Dämpfungswiderstand auf 0,42V justieren und dann aufnehmen.
5. Das in Schritt 3 aufgezeichnete Signal wiedergeben und überprüfen, ob die Ausgangsleistung dem Standard-Wert entspricht.
6. Falls sie nicht dem Standard-Wert entspricht, ist der Drehwiderstand 3 (linker Kanal) {Drehwiderstand 4 (rechter Kanal)} zu justieren, und dann sind die Schritte (2), (3) und (4) zu wiederholen, bis die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert; 0,4V ± 0,05V

Dolby-Rauschunterdrückungs-Schaltkreis

1. Der Testaufbau ist in Abb. 9 gezeigt.
2. Eine Normalband-Cassette einsetzen und im Aufnahmepause-Zustand des Gerätes ein 5kHz-Signal eingeben.
3. Mit dem Dämpfurgswiderstand so justieren, daß die Ausgangsleistung zwischen Anschluß ⑥ (linker Kanal) {Anschluß ⑲ (rechter Kanal)} des IC403 und Masse 12.3mV beträgt.
4. Den Rauschunterdrückungs-Schalter (NR) einschalten und prüfen, ob der Pegel wie vorgeschrieben gegenüber dem Pegel im rauschunterdrückungsfreien Zustand verändert wird.

Standard-Wert: 8 ± 1,5dB

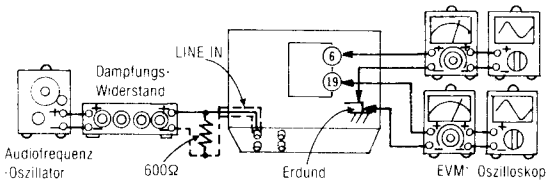

Abb. 9

FRANÇAIS

■ METHODES DES MEASURES ET REGLAGES

Appareils de mesurage

- Voltmètre électronique
- Oscilloscope
- Compteur de fréquence numérique
- Oscillateur de fréquence audio
- A.T.T. (Atténuateur)
- Voltmètre à C.C.
- Résistance (600Ω)

Réglage de l'angle des têtes de lecture

1. Le raccordement de l'équipement d'essai est montré à la Fig. 1.
2. Faire jouer la partie réglée azimutale (8kHz, −20dB) de la bande d'essai (QZZCFM) et. régler la vis de mise au point azimutale de telle sorte que les puissances de sortie du canal de gauche et du canal de droite soient au maximum.
   (Si les positions de réglage du canal de gauche et du canal de droite sont différentes, trouver une position où les puissances de sortie des canaux de gauche et de droite soient équilibrées, puis effectuer la mise au point.)
3. En même temps, établir une forme d'onde de Lissajous et éliminer la déviation de phase.
4. Après le réglage, bloquer les vis du réglage angulaire et de la hauteur des guides de bande.

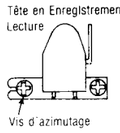

Fig. 2

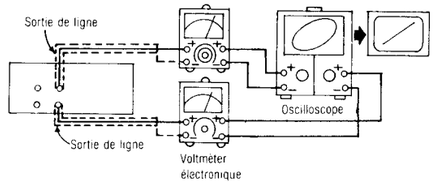

Fig. 1

Réglage de la vitesse de défilement de la bande

1. Le raccordement de l'equipement d'essai est montré à la Fig. 3.
2. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
3. Régler VR dans le moteur de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 3000±10Hz

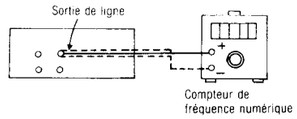

Fig. 3

Réponse en fréquence de la lecture

1. Le raccordement de l'équipment d'essai est montré à la Fig. 4.
2. Faire jouer la partie de la réponse en fréquence de la lecture (315Hz, 12,5kHz~63Hz, −20dB) de la bande d'essai (QZZCFM).
3. Vérifier que la fréquence soit en deçà de la plage montrée à la Fig. 5, à la fois pour le canal de gauche et le canal de droite.

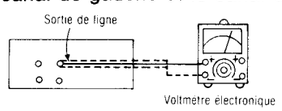

Fig. 4

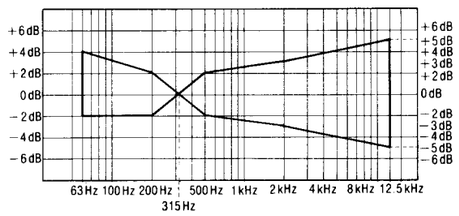

Fig. 5

Réglage d'amplification de la lecture

1. Le raccordement de l'équipement d'essai est montré à la Fig. 4.
2. Faire jouer la partie réglée d'amplification de la lecture (315Hz, 0dB) de la bande d'essai (QZZCFM).
3. Régler VR 1 (canal de gauche) [VR 2 (canal de droite)] de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 0,4±0,5dB (0,02V)

Réponse en fréquence globale

1. Le raccordement de l'équipement d'essai est montré à la Fig. 6.
2. Régler le commutateur sélecteur de bande sur la position normale.
3. Installer une bande vierge normale (QZZCRA) et enregistrer en appliquant un signal (50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz et 10kHz) de 20dB atténués provenant du signal du niveau d'entrée, de référence (1kHz, −24dB).
4. Faire jouer le signal enregistré à l'étape 2 et vérifier que le niveau de chaque fréquence de sortie soit en deçà de la plage montrée la Fig. 7 en comparaison avec la fréquence de référence (1kHz).
5. S'il n'est pas en deçà de la plage standard, régler le courant de polarisation avec VR101 (canal de gauche) [VR102 (canal de droite)], de telle sorte que le niveau de fréquence soit en deçà de la normale.
   - Niveau vers la haut dans la plage de fréquence élevée..... Augmenter le courant de polarisation.
   - Niveau vers le bas dans la plage de fréquence élevée..... Diminuer le courant de polarisation.
6. Après cela, amplifier le signal enregistré sur la bande vierge CrO_2 (QZZCRX) et la bande vierge métallisée (QZZCRZ) jusqu'à 12,5kHz et régler de la même manière que celle mentionnée ci-dessus. Puis, vérifier que le niveau de fréquence soit en deçà de la plage montrée à la Fig. 8.

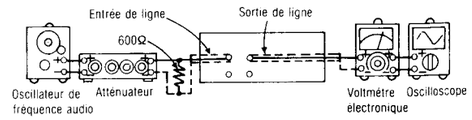

Fig. 6

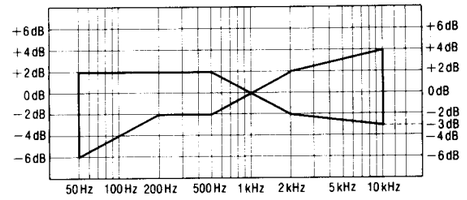

Fig. 7

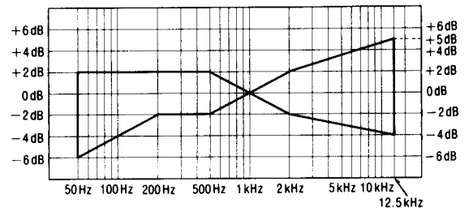

Fig. 8

Réglage d'amplification globale

1. Le raccordement de l'équipement d'essai est montré à la Fig. 6
2. Régler le commutateur sélecteur de bande sur la position normale.
3. Installer une bande vierge normale (QZZCRA) et appliquer le signal de niveau d'entrée de référence (1kHz, −24dB) sur le mode d'intermission d'enregistrement.
4. Régler la puissance de sortie 0,42V avec l'atténuateur, puis enregistrer.
5. Faire jouer le signal enregistré à l'étape 3 et vérifier que la puissance de sortie soit en deçà de la normale.
6. Si elle n'est pas en deçà de la normale, régler VR3 (canal de gauche) [VR4 (canal de droite)] et répéter les étapes (2), (3) et (4) jusqu'à ce que la puissance de sortie soit en deçà de la normale.

Valeur normalisee: 0,4±0,05V

Circuit de réduction des bruits Dolby

1. Le raccordement de l'équipement d'essai est montré à la Fig. 9.
2. Installer une bande normale et appliquer un signal de 5kHz sur le mode d'intermission d'enregistrement.
3. Régler avec l'atténuateur de telle sorte que la puissance de sortie entre la borne ⑥ (canal de gauche) [borne ⑲ (canal de droite)] de IC403 et la masse soit de 12,3mV.
4. Mettre en marche le commutateur de réduction des bruits et vérifier que le niveau change tel qu'il est spécifié à partir du niveau d'entrée sur le mode de sortie de réduction des bruits.

Valeur normalisée: 8±1,5dB

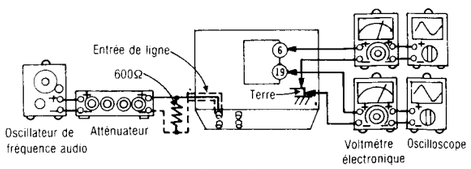

Fig. 9

ESPAÑOL

ESPAÑOL

■ METODOS DE AJUSTE Y MEDIDA

Instrumento de medición

- EVM (Voltimetro electrónico)
- Osciloscopio
- Frecuencimetro digital
- Oscilador AF
- ATT (Atenuador)
- Voltimetro CC
- Resistor (600Ω)

Ajuste acimutal de cabeza

1. La conexión del equipo de prueba se muestra en la Fig. 1.
2. Reproducir la parte ajustada de acimut (8kHz, −20dB) de la cinta de prueba (QZZCFM) y regular el tornillo de ajuste de ángulo de manera que las salidas de CH-I y CH-D sean maximizadas.
   (Cuando las posiciones de ajuste sean diferentes de CH-I y CH-D, encontrar una posición donde las salidas de CH-I y CH-D estén equilibradas y, luego, hacer el ajuste.)
3. Al mismo tiempo, trazar una forma de onda de Lissajous y eliminar la deflexión de fase.
4. Después del ajuste, fije los tornillos de ajuste de altura y ángulo de guía de cinta.

Fig. 2

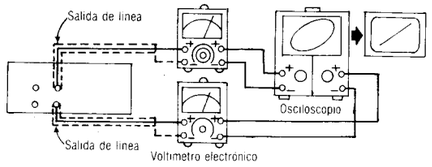

Fig. 1

Ajuste de velocidad de cinta

1. La conexión del equipo de prueba se muestra en la Fig. 3.
2. Reproducir la parte media de la cinta de prueba (QZZCWAT).
3. Ajustar el RV del motor de manera que la salida esté dentro de la estandard.

Valor estandard: 3000±10Hz

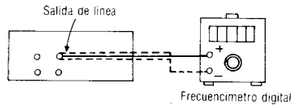

Fig. 3

Respuesta de frecuencia de reproducción

1. La conexión del equipo de prueba se muestra en la Fig. 4.
2. Reproducir la parte de respuesta de frecuencia de reproducción (315Hz, 12,5kHz — 63Hz, −20dB) de la cinta de prueba (QZZCFM).
3. Comprobar que la frecuencia esté dentro de la gama mostrada en la Fig. 5 tanto para CH-I como para CH-D.

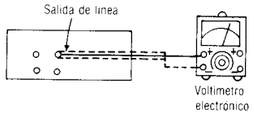

Fig. 4

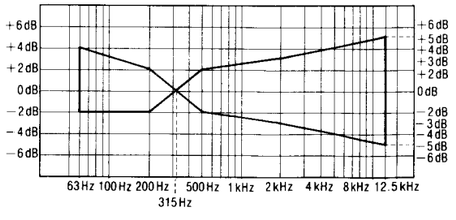

Fig. 5

Ajuste de ganancia de reproducción

1. La conexión del equipo de prueba se muestra en la Fig. 4.
2. Reproducir la parte ajustada de la ganancia de reproducción (315Hz, 0dB) de la cinta de prueba (QZZCFM).
3. Ajustar RV1 (CH-I) {RV2 (CH−D)} de manera que la salida esté dentro de la estandard.

Valor estandard: 0,4±0,5dB (0,02V)

Respuesta de frecuencia total

1. La conexión del equipo de prueba se muestra en la Fig. 6.
2. Poner el interruptor selector de cinta en la posición "normal".
3. Colocar una cinta virgen normal (QZZCRA) y grabar aplicando señal (50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz y 10kHz), 20dB atenuada de la señal de nivel de entrada de referencia (1kHz, −24dB).
4. Reproducir la señal grabada en el paso 2 y comprobar que el nivel de cada frecuencia de salida esté dentro de la gama mostrada en la Fig. 7. en comparación con la frecuencia de referencia (1kHz).
5. Si no está dentro de la gama estandard, ajustar la corriente de polarización mediante RV101 (CH-I) {RV102 (CH-D)} de manera que el nivel de frecuencia esté dentro del estandard.
   - Subir el nivel en la gama de alta frecuencia..... Incrementar la corriente de polarización.
   - Bajar el nivel en la gama de alta frecuencia..... Disminuir la corriente de polarización.
6. Después de eso, incrementar la señal grabada en la cinta virgen CrO_2 (QZZCRX) hasta 12,5kHz y ajustar de la misma manera como mencionado arriba y comprobar que el nivel de frecuencia esté dentro de la gama mostrada en la Fig. 8.

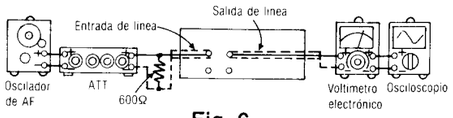

Fig. 6

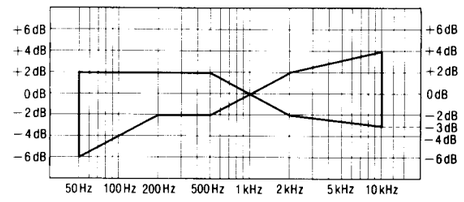

Fig. 7

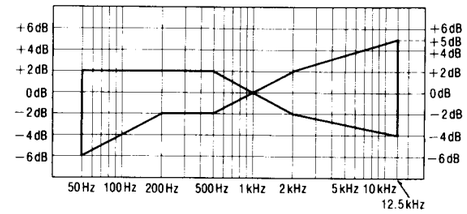

Fig. 8

Ajuste de ganancia total

1. La conexión del equipo de prueba se muestra en la Fig. 6.
2. Poner el interruptor selector de cinta en la posición "normal".
3. Colocar una cinta virgen normal (QZZCRA) y aplicar la senal de nivel de entrada de referencia (1kHz, −24dB) en la modalidad de pausa de grabación.
4. Ajustar la salida 0,42V mediante atenuador y, luego, grabar.
5. Reproducir la señal grabada en el paso 3 y comprobar que la salida esté dentro de la estandard.
6. Si no está dentro de la estandard, ajustar RV3 (CH-I) {RV4 (CH-D)} y repetir el paso (2), (3) y (4) hasta que la salida esté dentro de la estandard.

Valor estandard: 0,4V±0,05V

Circuito RR Dolby

1. La conexión del equipo de prueba se muestra en la Fig. 9.
2. Colocar una cinta normal y aplicar señal 5kHz en la modalidad de pausa de grabación.
3. Ajustar mediante atenuador de manera que la salida entre terminal ⑥ (CH-I) {terminal ⑲ (CH-D)} de IC403 y tierra sea 12,3mV.
4. Prender el interruptor RR y comprobar que el nivel cambia como especificado por el nivel en la modalidad de salida RR.

Valor estandard: 8±1,5dB

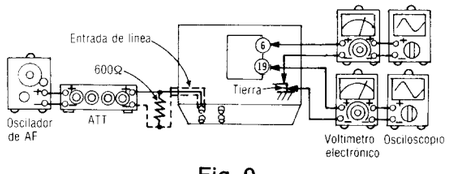

Fig. 9

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